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ABSTRACT

This report presents discussion from the 2000 Delaware Policy Forum "Planning Delaware's School Needs: Issues of Location, Design, and Infrastructure," which was held October 12, 2000, in Wyoming, Delaware. The forum brought together representatives of state agencies, including people from the Department of Transportation, the Department of Education, the Office of State Planning Coordination, and various school districts. Other attendees included builders, architects, and representatives from county planning agencies. The goals of the forum were: (1) to provide an overview of the current process used to plan for the siting of Delaware's schools; (2) to discuss steps and priorities for anticipating needs, selecting school sites, and determining how community infrastructure, including transportation, impacts the school siting process; and (3) to discuss new and comparative options for enhancing the process of placing Delaware's schools in appropriate sites. Forum presentations and discussions are grouped in the sections "National Trends," "School Siting in Delaware," and "Conclusion: Evaluation and Participant Feedback." (EV)

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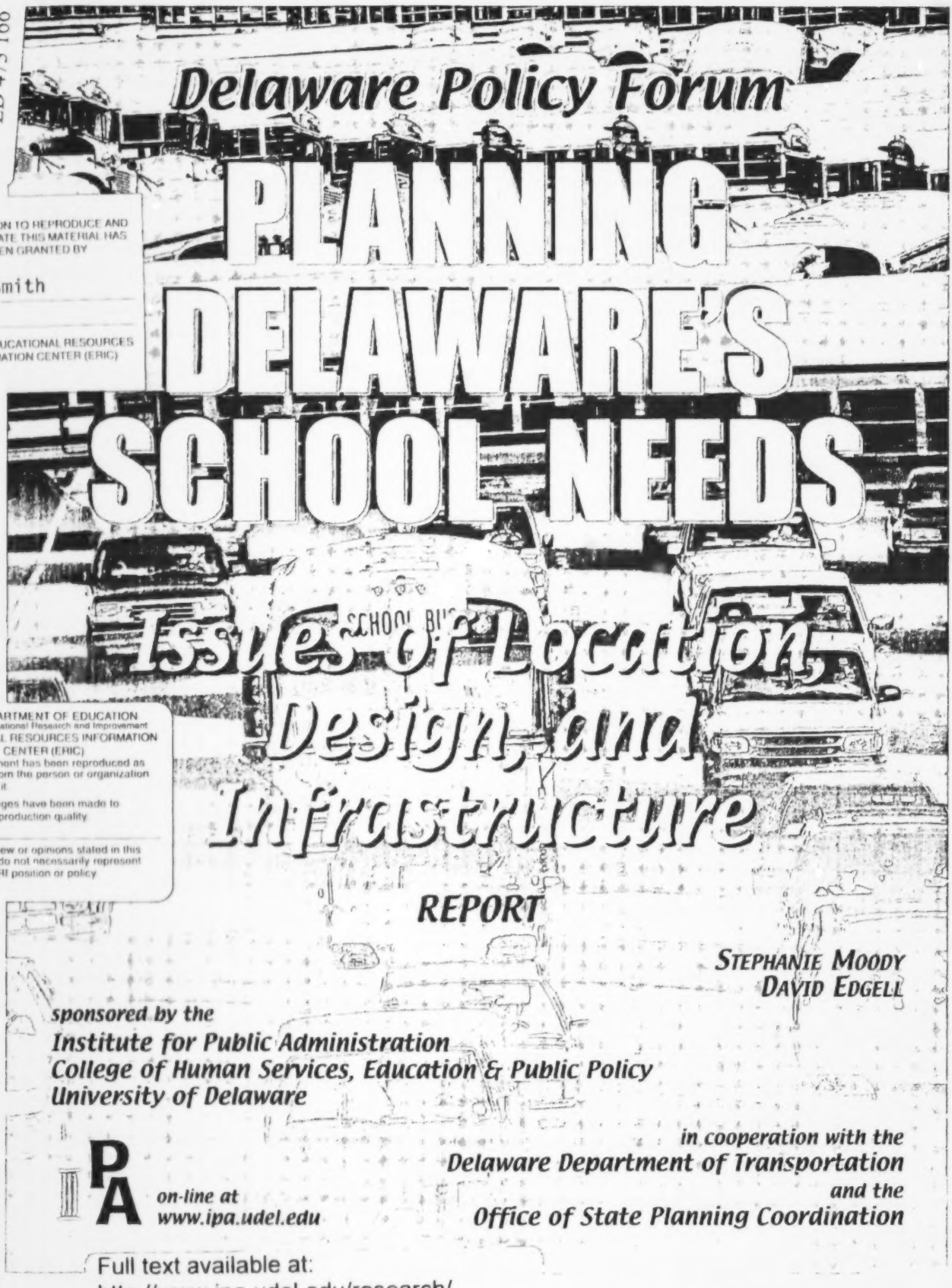

Delaware Policy Forum

PLANNING DELAWARE'S SCHOOL NEEDS

Issues of Location, Design, and Infrastructure

REPORT

STEPHANIE MOODY
DAVID EDGELL

sponsored by the
Institute for Public Administration
College of Human Services, Education & Public Policy
University of Delaware

in cooperation with the
Delaware Department of Transportation
and the
Office of State Planning Coordination

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Preface

Dr. Jerome R. Lewis
Institute for Public Administration

As the director of the Institute for Public Administration (IPA), I am pleased to provide this report on the 2000 Delaware Policy Forum "Planning Delaware's School Needs: Issues of Location, Design, and Infrastructure," which was held on Thursday, October 12, 2000 at the Wild Quail Country Club in Wyoming, Delaware. The Institute for Public Administration sponsored the event in cooperation with the Delaware Department of Transportation and the State Office of Planning Coordination. The forum brought together representatives of state agencies, including people from the Department of Transportation, the Department of Education, the Office of State Planning Coordination and various school districts throughout the state. Other attendees included builders, architects, and representatives from county planning agencies. A complete list of attendees can be found in Appendix A.

The goals of this forum were:

- To provide an overview of the current process used to plan for the siting of Delaware's schools.
- To discuss steps and priorities for anticipating needs, selecting school sites, and determining how community infrastructure, including transportation, impacts the school siting process.
- To discuss new and comparative options for enhancing the process of placing Delaware's schools in appropriate sites.

I would like to acknowledge those who contributed greatly to this forum. My colleague, Dr. Robert Warren (School of Urban Affairs & Public Policy, University of Delaware), was principally involved in the planning of this forum. I would like to particularly thank Secretary of Education Valerie Woodruff for her support and remarks at the forum. I want to acknowledge our speaker Paul Abramson, Associate Publisher of the School Planning and Management Magazine and President of Stanton Leggett and Associates, Educational Consultants, for his keynote address on *Planning and Locating New Schools: Challenging the Status Quo.* David Edgell (Policy Scientist/Planner, Institute for Public Administration) provided a detailed progress report on the *Location and Types of Built and Authorized Facilities.* Michael Mahaffie (Planning Program Manager, Office of State Planning Coordination) provided an overview of the *State Planning Strategies and the LUPA Process.* Nicholas Vacirca (Education Associate, School Planning & Maintenance, Department of Education) provided an overview of the *State Procedures for Planning and Siting Schools.* Vern Svatos (Computer Information Technology Associate, Institute for Public Administration) presented *Information Technologies to Plan and Locate New Schools.* Jennifer Davis (Associate Secretary, Department of Education), Joseph Cantalupo (Manager of Planning, Department of Transportation), Richard Moretti (Director, Business and Finance, Red Clay Consolidated School District, Department of Education), Andy Brandenburger (Superintendent, Cape Henlopen School District), Andy DiSabatino (President,

EDiS Company), Buck Simpers (President, Simpers and Associates), Charles Baker (New Castle County Department of Land Use), Connie Holland (Planning Director, Kent County Planning Department), Susan Shupard (Executive Director, Delaware School Boards Association), and Raye Jones-Avery (President, Kuumba Academy/Chair, Wilmington Neighborhood Schools Committee) provided various perspectives on the panel, *Issues and Opportunities in Projecting and Meeting School Facility Needs*. I would like to acknowledge the moderator of this panel, Dennis Loftus (Program Coordinator, Institute for Public Administration). I would also like to thank Gloria Wilkins for providing exceptional staff support for this project.

Finally, I would like to recognize the valuable contribution of the following individuals involved in producing this report. Stephanie Moody organized the endeavor to produce the final report. David Edgell provided advice and editorial comments on the draft report. In addition, Vern Svatos and Mike Mahaffie provided notes and feedback for their respective briefings on the school siting process. Lisa Moreland also assisted in editing the draft report, and Mark Deshon provided the impressive cover design for the report. Copies of this report can be found on the Institute's website at www.ipa.udel.edu/research/publications.

National Trends

Planning and Locating New Schools: Challenging the Status Quo

Paul Abramson, Stanton Leggett & Associates

The following section is an edited summary of comments made by Paul Abramson during his keynote address on "Planning and Locating New Schools: Challenging the Status Quo." According to Paul Abramson, who has been involved in the study of education construction over the past 25 years, public school systems have spent $18 billion on schools completed in 1999. Forty-five percent of that money was spent on new schools, 20% was spent on retrofitting or modernizing old schools, and 35% was spent on additions to existing buildings. Approximately $22.8 billion was to be spent on school construction projects started in the year 2000. One third of this money is being spent on elementary schools, while even more than that is being spent on high schools. In addition, one out of five dollars is being spent on middle schools. These statistics indicate that new schools are needed across the country and not just in isolated areas of the country, as was the case in the past.

In the past, there were only a few states whose school construction rates were burgeoning. Now, school construction is exploding across the entire United States. School construction has continued to increase over the past decade. In the following section the national problems, which have served as the catalyst for school construction, are reviewed. Following that, two solutions for addressing these problems are presented. These solutions include Abramson's thoughts on what new schools should look like and the technology needed to help address these national problems.

According to Abramson, there are several national problems that have been and will continue to be the catalyst for continued school construction. These problems include population growth, program change, technology, building condition, and political correctness.

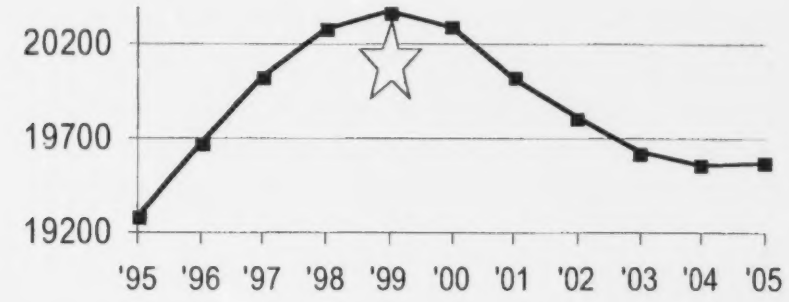
Population Growth

The first problem, population growth, is one that has existed for some time. The population of school age children is rising and this trend will not change any time soon. According to Abramson, "There are more children in our school systems today than ever in our history, more even than at the height of the baby boom period." Population statistics show that there was a peak of over 4 million children born in 1990, which has since decreased some. However, comparing the past ten years to the baby boom period, one finds that after the peak of the baby boom the statistic decreased to about one million children per year for eight years.

That significant decrease in the number of children being born after the baby boom peak is not happening now. The number of children being born per year is already on the rise, which also increases the number of children who are enrolling in public schools each year. Abramson explained, "There is a bulge right now that is occurring in the secondary schools." Schools will need more space for each child to combat the population growth.

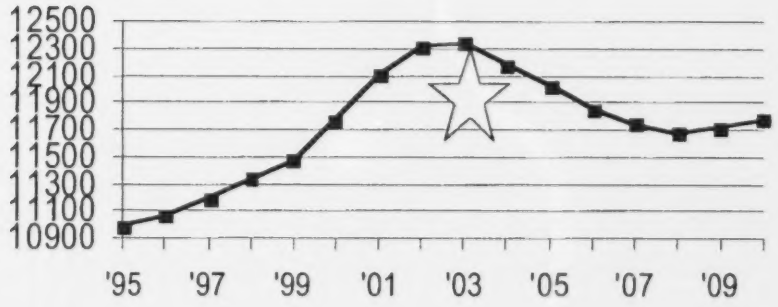
The graphs that follow contain the enrollment numbers for elementary, middle and high school age students.

Elementary Enrollments (Grades 1-5)



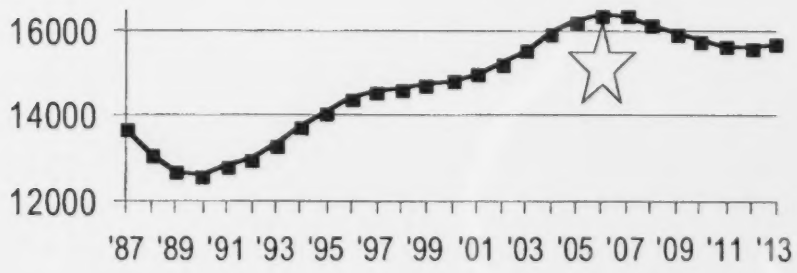
Source: Presentation by Paul Abramson, Stanton Leggett & Associates

Middle School Enrollments (Grades 6-8)



Source: Presentation by Paul Abramson, Stanton Leggett & Associates

High School Enrollments (Grades 9-12)



Source: Presentation by Paul Abramson, Stanton Leggett & Associates

Program Change

The second problem concerns the changes in programming and curriculum. This includes mainstreaming students with disabilities and the concept of cooperative learning. Similar to the problem of population growth, these program changes often result in the need for more space within schools.

Mainstreaming students with disabilities requires that school buildings incorporate the space that is needed for students who use wheelchairs or other assistive devices. For example, hallways, doorways, and classroom aisles need to be wide enough to accommodate the maneuvering of students who use wheelchairs.

The concept of cooperative learning is one where students work together to learn certain content areas. Weaving cooperative learning into the education program means that each classroom must have enough space for each student to work independently at his or her own desk, while also providing space for tables so that they can also work together in groups.

Thus, again, schools will need more space per child to incorporate these program changes. Extra space is especially needed for children with disabilities.

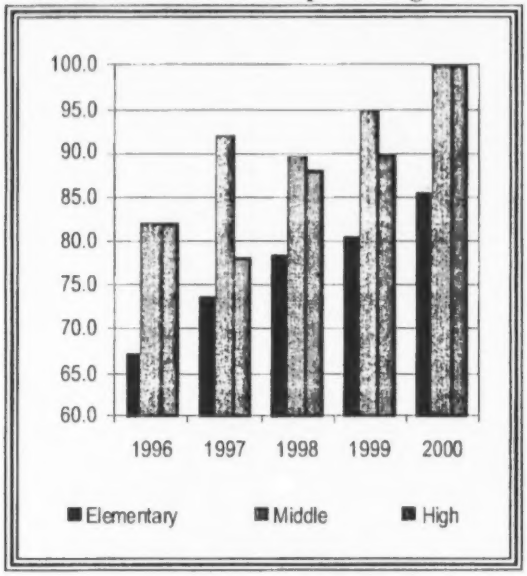
Technology

The use of technology is increasingly being added to teachers' curriculum. This means that computers are moving out of computer labs and into the classroom. In addition to the extra square footage required to accommodate cooperative learning and mainstreaming of children with disabilities, space must be provided in each classroom for computers and peripherals. If the computers are to be provided in the classrooms, however, they must have a positive benefit to the educational process. Teachers need to insure that they are accomplishing something with this technology. Abramson comments that, "If technology does not change the relationship between student and teacher, then it is useless."

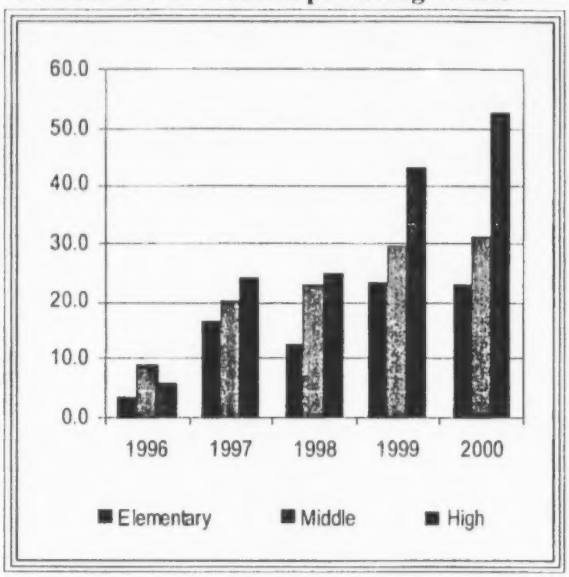
Many schools also need to be wired to accommodate the technology of the 21st century. Abramson's statistics show that in the year 2000, 100% of new middle and high schools and 85% of new elementary schools provided local area networks or LANs. Fifty percent of new high schools also provided wide area networks or WANs, as did 30% of new middle schools and 23% of new elementary schools. Therefore, not only do schools need space for technology, but also for the wiring required for technology. For the percentage of new schools providing LANs and WANs, see the tables that follow.

What New Schools Will Provide

Percent of New Schools providing LANs



Percent of New Schools providing WANs



Source: Presentation by Paul Abramson, Stanton Leggett & Associates

Building Conditions

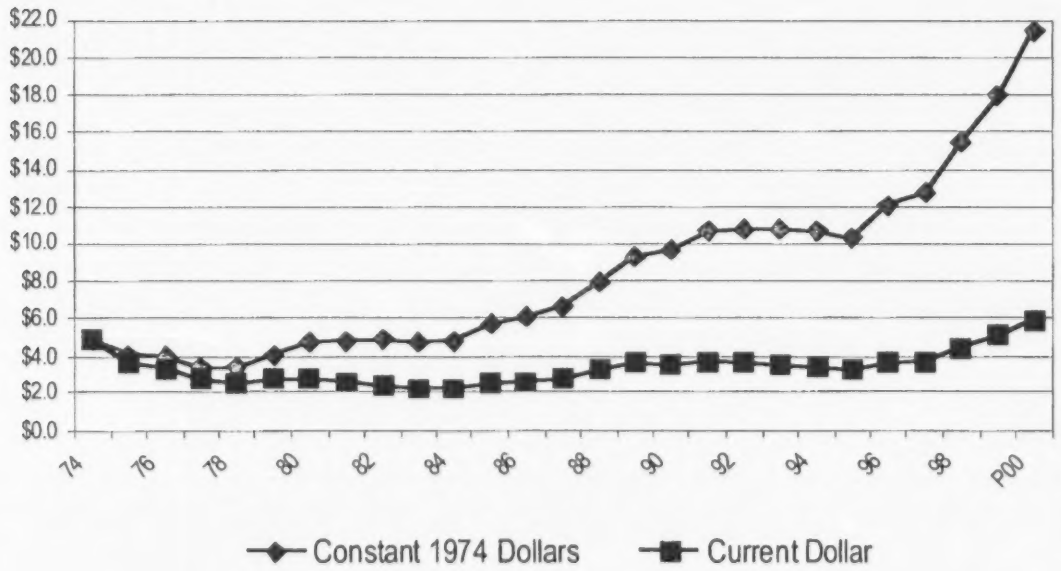
The building conditions of many schools are very poor. Many schools need to be upgraded to acceptable or adequate standards. Abramson's statistics show that fifty percent of all public schools had at least one inadequate building condition and 43% of all public schools had at least one unsatisfactory environmental factor. Abramson pointed out that students and teachers can overcome these facilities problems, but why should they be expected to? As an example of the low regard for environmental quality in public schools, Abramson notes, "Schools are the only buildings being constructed today where there is a question as to whether they should be air-conditioned."

Statistics show that children who learn in schools with poor building conditions score lower on achievement tests than children who learn in schools with fair or excellent conditions. According to Abramson, "Numerous studies have affirmed that children learn better in a better physical environment. Therefore, mandating better test scores is an exercise in futility unless the facility, program and teachers support better learning." See Appendix B for the percentage of public schools with less than adequate conditions and unsatisfactory environmental factors.

Political Correctness

There is a general will amongst the public to improve schools. It is politically correct to be concerned about schools, education and children. It is often the focal point of political campaigns and many more conversations. More dollars are becoming available due to the economic boom and more of these dollars are being spent on school construction than ever before. Because of the concern and increase in dollars being spent, Abramson feels that, "School construction will continue to grow for at least another decade and probably more." For the K-12 total construction cost, see the graph below.

K-12 Total Construction Cost
$ Billion vs. 1974 Constant $



Source: Presentation by Paul Abramson, Stanton, Leggett & Associates

There are solutions for all of these problems. However, the solutions are not necessarily easy ones. Solutions take time, commitment, and compromise from all parties involved. The following section outlines some of Abramson's ideals for designing new schools as a solution to combat the national problems described above.

The Ideal New School

The following section underscores several ideas for school design, which will help address the problems described in the previous section. Abramson stated, "It is easier to build a school for 1960, than for the 21st century, but it is wrong (to do so)." Things have changed since 1960, including our families, students, goals, and educational tools. Since these things have changed, our schools must also change. The following section provides Abramson's insight into ideas and recommendations for designing schools for the 21st century. These ideas include recommendations for school design capacity, acreage on which to place schools, support facilities within schools, and buildings that serve the communities in which they exist.

To begin, Abramson believes that in order to support education, school design capacity needs to remain small. He recommends that elementary schools have no more than 450 students, and middle schools and high schools should have no more than 600 students. Classrooms should be larger than 900 square feet and kindergartens should be larger than 1200 square feet.

To combat the problem of program change in schools, there has been a trend of increasing the square feet per child in each school. Elementary schools have shown an average increase of 70 square feet per child to 120 square feet per child. Middle schools have shown an average increase of 110 square feet to 140 square feet, and high schools have shown an increase of 120 square feet to 160 square feet per child.

Increasing the space per child means that, in some cases, more space or land is going to be needed per school. Typical suburban schools use a lot of expansive acreage. It is often easier to find a functional piece of land with expansive acreage in a suburban setting than in an urban setting. It may be difficult to build such a school in the city. Building a school with more space per child in an urban setting requires innovation. Abramson's suggestion for innovation, when there is not much acreage available, is to build a school up – not out. In these cases, a playground can be added to the top of the school building.

In addition to general space and acreage recommendations, Abramson described specific recommendations for each level of school. Elementary schools should have larger classrooms and kindergartens, and the schools should encourage flexibility for team teaching. They need to have proper support facilities, according to Abramson, such as separate rooms for music, art, gym, performances, library, cafeteria, and offices. In addition, elementary schools need room for technology and furniture, and should have space for pre-school and community facilities.

In Abramson's opinion, middle schools should be set up to encourage teaming projects. There should be space for science, technology, art, music and physical education, including room for a pool. Adequate workspace for teachers should be provided. Similarly to elementary schools, appropriate furniture should be available to encourage projects.

Many high schools are being divided into smaller units, as they should be, according to Abramson. However, high schools should try to make use of technology since the units are

becoming smaller. For some, the use of technology raises a question of how to offer advanced courses to high school students. Abramson feels that the answer is to change the relationship between the teacher and the student. Technology can help with advanced courses, or students can take such courses at local community colleges.

In addition to specific recommendations about each level of school, Abramson discussed the new and growing trend of building school facilities that serve the communities in which they exist. Abramson suggests that school buildings could contain a *health facility* for the community, since schools have need for nurses' examination rooms, dispensaries and clinics. Schools could also *serve meals* to the public, since they already house cafeterias, kitchens, and service contracts. Already, most schools serve two meals a day and they may be serving three or four in the future. Most secondary schools hire *security forces*. However, municipal police may be better trained than other security people. Schools could contain *childcare centers*. Schools teach family living and childcare, so a childcare center onsite would provide hands-on experience. *Public transportation centers* could also be located in the building. While school buses are waiting between their morning run and afternoon run they could provide transportation for people in the community. *Job training* could occur on-site. The resources are available to train adults before and after school. *Social services* might be located in the building. Schools employ social workers and other professionals and these people could also be used to help the children and their families, thus working within the communities as well as the school. The site could also *educate adults,* helping them get their GED or offering language classes. *Recreational activities* could also occur there. After school hours, the community could have access to the gym and other recreational activities. *Public libraries* could also be located in the school facility to be enjoyed by all. Libraries have been the center of some communities for a long time. The school site would also be a good place for *conference and meeting facilities*. Many communities need meeting space for local organizations and performances. *Senior centers* could be located within the school facility, so that interactions may take place between older adults and younger generations.

Abramson clarifies that in a situation like the one described above, there may be problems that need to be worked out. The building sounds ideal, but the coordination of the daily operations of such a building is not easily done. Abramson expresses his beliefs that the security of children is critical and that student work must be preserved. He asks the question, "How do you determine who pays for what, like janitorial service, and who runs what?" In situations like this one, there can be difficulties with insurance, and there can even be turf wars. However, problems can be addressed and solved to create the right formula for success.

Information Technologies to Plan and Locate New Schools

Vern Svatos, Institute for Public Administration, University of Delaware

The following is an edited summary of comments made by Vern Svatos during his presentation on "Information Technologies to Plan and Locate New Schools." The use of current technology and the computerization of school related data could greatly aid in the school site selection process. One of the national problems discussed above was population growth. When there is population growth, new schools need to be built. Recent advances in Geographic Information System (GIS) technology give the school planner new tools to determine when and where new schools may be built.

Desktop geographic information systems, such as ArcView developed by the Environmental Systems Research Institute (ESRI) of Redlands, California, are well-suited for performing site location analyses with resultant map output. A common method is to do an overlay analysis followed by a network or service area analysis. On-screen mapping overlay techniques are used to identify potential sites based on physical environmental data, such as available properties of a certain size, sewer and water availability, floodplain location, steep slopes, and other environmental, social, economic, or political constraints. Service area studies further refine the site location analyses by incorporating data for school age population including both the students' geographic locations and grade levels. An out-of-the-box GIS can usually perform the environmental site location analysis, assuming the data are available in a digital form for mapping. However, while current school-age population and the projections for this population can be mapped and analyzed with a base GIS system, it is more efficient to use existing software which has been written specifically for this purpose but also works in conjunction with the desktop GIS.

Two of the more well-known examples are the school siting and redistricting programs created by Davis Demographics of Corona, California and The Omega Group of San Diego, California. Before analyses can be performed, current school population data would be required, and it would have to be formatted so it could be used in the interations performed with the GIS. Once a number of potential sites have been identified, various scenarios can be run on the potential sites using the environmental and student population data. District boundaries can be easily redrawn on the screen to immediately see how many students would be affected by a boundary redefinition. Current technology, personal computers, and desktop GIS and related software, provide planners with new tools to use in the school planning process.

School Siting in Delaware

The following is an edited summary of comments made by Nick Vacirca and Mike Mahaffie in regard to the school siting process in Delaware. Delaware faces many of the same issues that Abramson addressed, but also faces other issues that are unique to the state. These issues are being and will continue to be addressed, as long as there is concern. The findings of this forum demonstrate evidence that there is concern and a commitment to address the issues. The following section provides a review of the current process for siting schools in Delaware, and addresses Delaware's unique issues and those that are similar to the national issues. Some examples of innovation in Delaware are also highlighted.

State Procedures for Planning and Siting New Schools

Nick Vacirca, School Planning & Maintenance, Department of Education

Although the Delaware process for siting schools seems well ordered, there are several state issues that have and will continue to affect the siting of schools. As Nick Vacirca pointed out, "These issues include: proximity of the site to towns and municipalities, feeder and growth patterns, road improvements, access to water and sewer, the size of the property, the state spending map, overall growth in the area, and the GIS data." As is explained below, all of these issues are taken into consideration through the Delaware process of planning for new schools.

There are several phases for siting a school in Delaware, depending on which district is involved and the location of the proposed school site. These phases can include consideration and decisions by the school district, the Department of Education (DOE), the Office of State Planning Coordination (OSPC) and the county or municipal governments. Two of these phases, the DOE phase and the OSPC phase, are reviewed below.

Department of Education

When a school district submits a request to build a new school to the Department of Education, the request is forwarded to the Budget Office in November. Once there is agreement on projects that have been submitted, a Certificate of Necessity is issued, which is usually a 4-month process. When a school district has obtained the Certificate of Necessity, its local share can be raised through referendum. The State funding of a school district's request has to be approved through the Bond Bill, which usually occurs in July.

State Planning Strategies and the LUPA (Land Use Planning Act) Process
Mike Mahaffie, Office of State Planning Coordination

The Office of State Planning Coordination (OSPC) is charged with coordinating planning efforts and local land use change reviews by state agencies. It reports to a Cabinet Committee on State Planning Issues. The OSPC tracks land use change proposals and collects and maintains statewide planning data to help guide development in a pattern that fosters the efficient use of state resources and protects natural and cultural resources.

To help coordinate these efforts, the Cabinet Committee approved a set of state "Investment Strategies" in December 1999. The Strategies were intended to help guide the timing and pattern of development and to make sure that state spending and policies promote quality and efficiency and foster order and resource protection.

Land use decisions in Delaware are made at the county and municipal levels. The "LUPA" process outlined in the Land Use Planning Act (Chapter 92, Title 29, Delaware Code, as amended by House Bill 506, signed by Governor Thomas Carper on July 18, 1996) is the main vehicle to provide comment on those decisions as local governments consider proposals. The LUPA process provides an opportunity for state agencies to give coordinated feedback to school districts on potential sites. There are no veto powers through the LUPA process.

Currently, school districts submit proposed sites at a variety of points in the process. In some cases, school districts submit the sites for review as part of their own review of possible sites. Other school districts submit sites when they are forwarded to the Department of Education. Other school districts submit sites before making their own final decisions. It is possible for a site not to be submitted until a local government approval (rezoning, conditional use, etc.) is needed, though this has not happened in recent memory.

Ideally, the LUPA process for school site review begins with a school district submitting a notice to the Department of Education (DOE), which forwards the notice to the OSPC. The DOE recommends that for each planned new school, four potential sites be selected and submitted for review. The OSPC maps the land parcels in question in a Geographic Information System (GIS) and sends notices to state agencies and local governments that may be affected by the school district placement of a school at the site in question. For a list of the state agencies that are asked to comment, please see Appendix C.

Each recipient of the notice provides comment and/or data where applicable to the OSPC. The OSPC collects all comments, collates them and forwards the comments on to the appropriate government. The OSPC tracks LUPA projects in a database that includes all projects, location information, site details, and state agency reactions. This database is linkable with the GIS data set of LUPA parcels. LUPA notices, responses, and GIS data are available on-line on the OSPC website (www.state.de.us/planning/). For an example of a LUPA response, see Appendix D.

The Need for New Schools in Delaware

David Edgell, Institute for Public Administration

Panel Discussion on Issues and Opportunities in Projecting and Meeting School Facility Needs

The following sections contain an edited summary of comments made by David Edgell during his presentation on "Location and Types of Built and Authorized Facilities." These sections also contain edited comments made by panel members during their discussion on the "Issues and Opportunities in Projecting and Meeting School Facility Needs." The national problems described by Abramson are also local problems, which can be found in Delaware. Several new schools have been built in Delaware during the past couple of years and many more districts have passed referendums to build schools or are currently building schools to keep up with the previously mentioned national problems of increasing enrollment numbers, poor building conditions, technology accessibility, and changes in school programming.

The state of Delaware faces the same problems as many schools and states face nationwide, including increasing enrollment numbers. The population of school age children has grown in Delaware, as it has nationally. Many schools in Delaware are using portable classrooms in addition to their regular buildings because they are over capacity. There is no denying that new schools are needed to combat the population growth, but in Delaware determining the number of schools needed and where to build them is complex because of the increasing number of students utilizing school choice, the increasing number of charter schools, and the neighborhood schools legislation.

School choice legislation allows parents to disregard predefined feeder patterns and send their children to whichever school they choose. School choice may be utilized within the original school district and across districts, meaning that parents can choose to send their children to a different school in their district or to a school in another district. Districts are only permitted to allow new students to "choice in" to schools with adequate capacity for the additional students. One concern with school choice is transportation. Currently, parents are responsible for transporting their child to the school or to a bus stop on a route that feeds the desired school. Another concern for districts is the predictability of enrollment. When school choice is utilized, it is hard to know how many students will choose a certain school over another each year.

Another issue that leads to unpredictability for districts is the emergence of charter schools. Charter schools are state funded schools that are operated by private organizations. These organizations may be for profit corporations or non-profit groups. Typically, charter schools are developed around a central theme (such as the performing arts or sciences), or in response to certain perceived educational needs in a neighborhood or area. Students must apply to attend a charter school, but there are no tuition costs. Currently, there are seven charter schools operating in the state, with a total of 2,620 enrolled students. This represents approximately 2% of the total students in Delaware schools, and is expected to rise in the near future. There are an additional ten charter schools that have been approved and are not yet opened for various reasons.

Charter schools can affect school districts in two ways. First, students are choosing to attend the charter schools rather than the public school to which they have been assigned. This makes it difficult for the school districts to estimate how many students will be enrolling in particular schools in a given year. However, should the students decide to reenroll in their assigned public schools at any point, the district is obligated to take them back. Secondly, when a student chooses to enroll in a charter school, the school district loses the state funding for that student. Each student's state funding is transferred from the school district to the charter school. While the number of charter schools and students attending those schools is relatively small at this time, the predicted growth in charter schools may cause some districts more serious problems in years to come.

The Neighborhood Schools Legislation (Chapter 2, Title 14, Delaware Code, as amended by House Substitute 1 to House Bill 300) is a third factor, which may make it more difficult to plan when and where new schools should be built. This intent of this legislation is to make it a requirement that students attend the schools that are closest to them. The goals are to reduce the amount of time students spend on the school bus each day and to reinvigorate the idea that schools should be a focal point of neighborhoods and communities. While this is certainly a worthy concept, there are many issues surrounding the neighborhood schools concept. Research completed for this forum by the University of Delaware's Institute for Public Administration revealed that there is an excess design capacity of 14,308 students in public schools statewide. However, certain districts are currently operating over capacity and are building new schools to respond to enrollment pressures. This indicates that capacity exists in existing school buildings, but those buildings are not located where people are living in the state. Complying with the neighborhood schools legislation will be a challenge for some school districts, and may necessitate the construction of new schools near emerging centers of population in some cases.

Echoing these issues during the panel discussion, Dick Moretti stated that, "The increasing enrollment numbers are confused by the trends of school choice and charter schools," and he pointed out that, "the Red Clay Consolidated School District's Board of Education has said that every new school built in the district will be an all-choice school, with preference zones." To reiterate this point, Jennifer Davis stated, "Delaware has the highest percentage of school choice (11% to 12%) in the nation. Neighborhood schools legislation will also make the process of planning for new schools more difficult."

The instructional methods being used in the classroom are changing in Delaware, as they are nationally. There is more use of technology and cooperative learning. Students with disabilities have been and are continuing to be mainstreamed into the education system. Andy Brandenburger stated, "Instructional methods are changing and education is going to be different. Schools will need to be built to fit the instructional methods being used."

Some Delawareans believe that public schools do not meet all of the instructional needs of a community. Several charter schools have been created that provide variations in the typical

instructional methods of education. Raye Jones-Avery stated, "New schools are needed when the existing one does not serve a community's needs, thus the reason that many Charter schools are initiated."

Currently, Delaware is also making the move to have every classroom wired for technology accessibility. However, many school buildings need to be retrofitted or rebuilt to compensate for poor building conditions.

Delaware faces the same problems that many states do nationally, but they also are grappling with several issues specific to their state. The forum encouraged great discussions about the Delaware process for planning new schools. As was presented by several attendees and panel members at the forum, there are many issues throughout the process that still need to be examined. These issues included the need for a better process in general and the need for a better funding formula.

The Need for a Better Process
Panel Discussion

The overwhelming issue discussed at the forum was the need for a better planning process in Delaware. Several panel members discussed the process, it's inadequacies, and how those inadequacies may be made better. Some of these inadequacies include the length of time for the process, community involvement in the process, cooperation with state agencies and other interested organizations, the design approval process, and other uses for school buildings.

The Delaware school construction process can take as long as five years, from the time the idea is conceived until the time the first child walks through the door. The process could be shorter in several ways, which would make for a better process in general. Dick Moretti explained, "If the timeline could be condensed to at least three years from the idea to the reality, the process would be better." Another panel member, Susan Shupard said, "It would be helpful to look at referendums and revise the timing of the certificate of need to shorten the process, so that a school can be built before it is over capacity." Shortening the length of the process is clearly a valid solution to many. Revising the process may be another option. Andy DiSabatino explained, "It is easy for charter schools to build their buildings once they receive funding, because they do not have to go through the same process that public schools do. In addition, if the process were shortened, the construction time frame would also be shorter."

Many panel members liked the concept of schools being a part of the community. In order for this to happen, there needs to be more community involvement throughout the planning process. Connie Holland suggested, "School districts should help with pre-selecting sites on which to build schools in the future. Such pre-selected sites could be noted in county comprehensive plans, which would also shorten the process, but this pre-selection process can not happen without community involvement." It is also important to have public involvement in the process

since it is ultimately the public who votes on the referendum that funds school construction to actually pay for a school to be built. Andy Brandenburger said, "The process would be better if there was a central mechanism whereby a vision could be captured to have buy-in from the public."

According to several panel members, cooperation and communication between state agencies and other interested organizations are the keys to a better process. As Jennifer Davis pointed out, "Even at the forum, there were representatives from all different aspects of the process, but every single representative had something in common and that is that they have struggled with the process. Therefore, communication is critical." Communication should occur between many different parties including school districts, the Department of Education, other state departments, and even charter schools. Raye Jones-Avery said, "Charter schools need to be brought into the communication process, especially if they are to be part of the coordination efforts." Joseph Cantalupo explained, "If state agencies, such as the Delaware Department of Transportation (DelDOT) could get on similar planning schedules by working with school districts, planning for infrastructure such as adequate sidewalks, connecting roads, and bus safety would be much easier." It is also important for the builders to be included in the communication. Andy DiSabatino revealed, "Builders are beginning to get involved in the school planning process from the beginning to provide a construction point of view, which also enables builders to understand all of the issues and to contribute to making the right decisions along the way." "County planning and land use departments can also help coordination efforts by making sure ahead of time that there is available zoning to build schools and by reviewing possible sites in a faster time frame, as the New Castle County Department of Land Use does," Charles Baker commented.

Another solution for a better process is to change the design approval process. Buck Simpers said, "It is very frustrating to have been working on a design for months and then to have a decision made about the design in a 15-minute period." If schools and architects worked together, the process could be less frustrating. "Certain things could help this process such as having standardization of building materials across the state," as Jennifer Davis suggested. A standard of minimum requirements for building schools should be developed and understood by architects, so that they can do their job. Several panel members agreed and believe that this mix of minimum requirements and knowledgeable architects gives a school district the best of both worlds.

Several panel members felt that finding other uses for schools buildings also helps to make the process easier in more ways. Charles Baker explained that, "Finding partnerships for some buildings may make it easier to find locations for schools." Buck Simpers said, "We should think about what the building can be and what it will be used for in the future so that flexible buildings can be designed to be used not only for schools but also for other things both now and in the future." Another panel member, Andy Brandenburger suggested that, "School buildings be recycled about every 30 to 35 years."

The Need for a Better Funding Formula
Panel Discussion

Part of creating an improved planning process involves a better way to fund new schools. Several panel members and attendees were concerned with this issue and pointed out that it can be difficult to acquire inexpensive land on which to build new schools. The state may recommend a certain area to build on that may be different from what the school district had in mind. "There may be a price difference of about 80,000 to 100,000 dollars an acre versus 17,000 dollars an acre, as is the case in the Cape Henlopen School District," said Andy Brandenburger. This can make it very hard to sell a referendum to the public. Mr. Brandenburger suggested, "The tax rate should be adjusted so that you can deal with the escalation costs." Buck Simpers stated, "There is a great opportunity for the private sector to help with financing schools." Right now, the Department of Education has 180 million dollars worth of projects left to fund and five million dollars worth of projects on their desks. As Jennifer Davis states, "Funding is definitely an issue and DOE is dealing with impact fees and revenue issues connected to the subject of integrating schools into communities."

Just as there are problems in every state across the nation, Delaware has it's own share. However, the comments provided by the panel members demonstrated that there is commitment to solving these problems. Several of Delaware's schools, as described below, provide examples of innovative ideas, communication, and cooperation between all involved parties.

Delaware's Examples of Innovation
Panel Discussion

Abramson's ideal school for the community was described in a previous section. Delaware is on the cutting edge of the Abramson ideal, as is shown by one of it's schools that was designed with the community in mind, the new Middletown High School. The Middletown High School contains all of the functions housed in a traditional high school, along with a state service center under the Division of Health and Human Services and a branch of the New Castle County Library.

Other schools are also incorporating community use into their buildings. Delaware Technical and Community College will be offering several classes at Cape Henlopen High School in the spring of 2001. Related and perhaps a continued catalyst for sharing resources among the communities and their school systems, the Kent County Planning Department recently received a concept plan for the Harrington area to locate a nursery school and an assisted living facility located on the same site so that they may share activities and resources. There are innovative working examples nationwide and in Delaware of schools with community uses from which to learn. Delaware's school districts have and will continue to prove that innovation can be a commitment.

Conclusion

Evaluation and Participant Feedback

Based on evaluations of the forum by the attendees and recommendations from attendees and panel members, several topics have been raised for future consideration as possible policy forums conducted by the Institute for Public Administration. These topics include funding issues, school building design issues, pre-planning of sites, and population projections.

Funding Issues

There were several concerns about funding school construction. It can be difficult to acquire land because when a school district tells a landowner that they are interested in land, property owners speculatively raise the price. Several attendees raised concern about not providing enough funds to build schools that are up to today's standards or that implement the curriculum that is planned. Several people feel that without proper funding, the construction process may be guided by the "cookie-cutter" idea of having all schools designed and built alike. There is great concern about the cost escalation of building schools and what can be done to stop or slow the escalation down. There was also concerned raised about not knowing from year to year what funding will be approved by the Bond Bill.

On evaluations, the funding issue was the number one requested topic for future forums. Of the 25 attendees that answered that question on the evaluation, seven people requested that future forums be conducted on funding school construction and two people requested that future forums be conducted on cost estimating.

School Building Design Issues

This topic was followed closely by school building design issues. Of the 25 attendees that answered the question of what topic they would like to see forums held on in the future, seven attendees said that they would like to see forums on design of school buildings and non-traditional site design issues, including Paul Abramson's ideas of "building schools up, instead of out" and building schools for communities.

One attendee stated that schools would like to be resources for the community and felt that it would be easier for them to do so if the state would look at all the issues surrounding schools as community resources so that the schools don't have to make hard choices about the resources that they currently have. Several concerns were raised about the roadblocks of using schools as community resources. One thing to take into consideration includes the maintenance of such a building, meaning that there can't be the same number of custodians in a community building as there would be in a school. A school built with community uses needs more custodians, but how is it decided who will pay for those jobs?

Pre-Planning of Sites/The Process

The school siting and construction process is an issue that raised concern by many. Although only four attendees, out of the 25 said that they wanted a forum on the process and pre-planning of sites on their evaluation form, seven panel members felt that the process should be reviewed.

Several people mentioned communication, both between public schools and charter schools, as something that needs to be improved in order to make the process a better one. Concern was raised about being able to think about building a new school before the old one reaches or exceeds its capacity. One panel member recommended that school districts help counties pre-plan and pick sites ahead of time, so that when it comes time to pick the land, it is already done. This would be one way to shorten the process. The New Castle County Land Use department has exempted schools from some of the environmental rules, which helps to make the process a speedier one. They also do their site review in only four to five weeks, instead of four to five months. One attendee recommended that the state rewrite the construction standards to include an example of an acceptable design for each of the three age groupings for which schools are typically built (elementary, middle and high school).

Population Projections and Technology

Only one attendee requested that population projections be looked at as a possible forum topic in the future. However, population projections are closely related to the process. Being able to better predict population growth, means that there is a better chance of building new schools before old schools have reached their capacity. As was discussed previously, there are tools that exist, that could be used to better plan for new schools.

This policy forum was a great start to addressing school siting issues in Delaware. The forum provided the vehicle to address the concerns of all involved, including state agencies, school districts, builders, architects, representatives from county planning agencies, and parents. There is an escalating amount of work to be done in order to solve the issues and it will take great commitment on the part of many people. However, there is no denying that school siting and the issues that go along with it will continue to be concerns that require attention.

Appendix A

PARTICIPATION LIST

ABBOTT, Gene
Delaware Department of Transportation

ABRAMSON, Paul
Stanton Leggett and Associates

BOSWELL, Arthur W.
City of Wilmington

BOYD, Kevin
Christiana School District

BRANDENBERGER, D. Andy
Cape Henlopen School District

BROCKENBROUGH, William
Delaware Department of Transportation

CANTALUPO, Joseph
Delaware Department of Transportation

CARSON, Kevin E.
Woodbridge School District

DAISEY, Stephanie
IPA/University of Delaware

DAVIS, Jennifer
Delaware Department of Education

DAVIS, Mark
Delaware Department of Agriculture

DEARDORFF, Joseph M.
New Castle County Vo-Tech School District

DENHARDT, Kathy
CHEP/University of Delaware

DiSABATINO, Andy
EDIS Company

DOOLEY, David
Delaware Transit Corporation

DOWNS, Sandra J.
Capitol School District

EDGELL, David
IPA/University of Delaware

EDMISON, Jeff
Christina School District

ENGLISH, Joseph
Appoquinimink School District

ESPOSITO, Gerry
Tidewater Utilities, Inc.

FALONE, Emily
Delaware Emergency Management Agency

FITZGERALD, H. Thomas
Laurel School District

FOSTER, Margaret
Buck Simpers Architect & Associates

GARRISON, Rachel
IPA/University of Delaware

GATEAU, J.
Lake Forest School District

GEIER, Bobbie
Delaware Department of Transportation

GLAZESKI, Richard J.
Capital School District

HENRY, Marcus
IPA/University of Delaware

HERSHEY, Bob
Appoquinimink School District

HITE, Monroe C.
Delaware Department of Transportation

HOLLAND, Connie
Kent County Planning Service

HUDSON, Charles
Indian River School District

HUDSON, Steven M.
Colonial School District

JONES-AVERY, RAYE H.
Kuumba Academy/Wilmington Neighborhood Schools Committee

KELLEY, Michael
Poly Tech School District

KRAUSE, Tim
Milford School District

KUHLS, Steven A.
Red Clay Consolidated School District

LEWIS, Jerome R.
IPA/University of Delaware

LOFTUS, Dennis L.
IPA/University of Delaware

LOVE, Ronald
Department of Education

MAHAFFIE, Michael
Office of State Planning Coordination

MARCHIO, Tony J.
Appoquinimink School District

MINNI, Nicole
WRA/University of Delaware

MORETTI, Richard D.
Red Clay Consolidated School District

MORRIS, Dorothy
Office of State Planning Coordination

O'DONNELL, Ed
IPA/University of Delaware

POSTLES, Charles
Milford School District

RILEY, Capes
Christina School District

RUTT, Barbara B.
Milford School District

SCHREFFLER, Carol C.
Sussex Technical School District

SETTLES, Alex
IPA/University of Delaware
SHARP, Donna S.
Office of State Planning Coordination

SHUPARD, Susan
Delaware School Boards Association

SIMPERS, Buck
Simpers and Associates

SMITH, Robert D.
Milford School District

SVATOS, Vern
WRA/University of Delaware

TUCKER, Shawn
New Castle County Department of Land Use

TUTTLE, Douglas
IPA/University of Delaware

VACIRCA, Nicholas
Delaware Department of Education

VALESKI, Victor P.
Caesar Rodney School District

VIAR, W. Jeffrey
Brandywine School District

WARREN, Robert
University of Delaware

WEER, Gregg
Indian River School District

WHITTAKER, Roy
Seaford School District

WICKS, Debbie
Smyrna School District

WILKINS, Gloria R.
IPA/University of Delaware

WOODRUFF, Valerie A.
Delaware Department of Education

Appendix B

Percent of Public Schools with Less Than Adequate Building Conditions

			Percent Minority			
	All	Central City	5%-	6-20	21-50	Over 50
At Least One Inadequacy	50	56	48	49	46	59
Roof	22	23	21	25	17	28
Ext Walls/Windows	24	27	26	23	17	29
Interior Finish	17	20	14	17	14	24
Plumbing	25	28	22	26	23	29
HVAC	29	30	28	29	25	34
Electric Power	22	26	18	18	19	32
Lighting	17	18	16	16	15	23
Life Safety	20	21	18	22	18	24

Source: Presentation by Paul Abramson, Stanton, Leggett & Associates

Percent of Public Schools with Unsatisfactory Environmental Factors

			% Free/Reduced Price Lunch			
	All	Central City	20-	20-39	40-69	Over 70
At Least One Unsatisfactory	43	47	38	42	41	55
Lighting	12	14	8	13	10	19
Heating	17	18	17	15	18	18
Ventilation	26	30	24	29	24	29
Indoor Air Quality	18	22	14	20	17	24
Acoustics or Noise Control	18	20	14	18	15	25
Physical Security of Buildings	20	14	17	22	21	17

Source: Presentation by Paul Abramson, Stanton, Leggett, & Associates

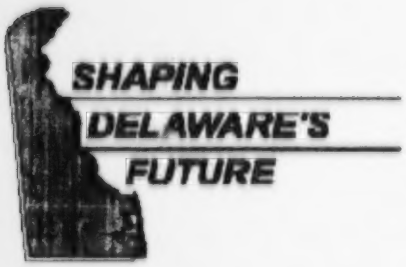
Appendix C

State Agencies Asked to Comment on LUPA Notice

- Delaware Health and Social Services
- Department of Transportation
- Delaware Economic Development Office
- State Budget Office
- State Housing Authority
- Department of Agriculture
- Department of Natural Resources and Environmental Control
- Historical and Cultural Affairs
- State Planning Coordination
- Fire Marshall's Office
- Department of Education

Appendix D

LUPA Response Example



Land Use Planning Act (LUPA) Notice

Project:	LUPA No. 04030001
Local ID:	Sussex Co. C/U #1333
Applicant:	Albun, Inc., T/A Seacoast Speedway
Location:	Southeast intersection of U.S. Route 113 and Road 321 and southwest intersection of Road 325 and Road 326
County:	Sussex
Tax Map #:	1-33-2-22,23,24 & 24.01
Drainage area:	Inland Bays
Area:	81.84 Acres
Present zoning:	AR-1
Proposed zoning:	AR-1 with conditional use
Current use:	non-conforming stock car racing track
Proposed use:	Continue as a stock car track and new development of harness racing and pari-mutual wagering, grandstands and paddock area
Sanitary facilities:	CENTRAL - provided by Town of Georgetown
Water supply:	CENTRAL - provided by Town of Georgetown
Special notes:	In the Rural Area on the Strategies for State Policies and Spending map
Project Time Line:	
Date Circulated:	4/3/00
Comment deadline:	4/24/00
Comments due to:	David S. Hugg III State Planning Coordinator Office of State Planning Coordination 540 S. DuPont Hwy., Suite 7 Dover, DE 19901

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	E-Mail Address: [illegible]@nsbn.org Date: 11/22/02

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